



Hazard Alert: Heat Illness Prevention

Overexposure to heat can be a significant problem especially for miners in jobs that require heavy physical labor in hot or humid environments. Heat Stress occurs when internal body temperature is higher than 100 deg. F and significantly reduces workers' performance and can require medical attention. This alert describes how to recognize the risk factors and the signs and symptoms of heat stress. **The best solution to dehydration and heat illness is PREVENTION!**

Risk Factors for Heat Stress

- Heavy and prolonged physical labor
- Hot humid weather
- Direct sunlight
- Work near hot equipment
- Wearing chemical protective clothing, some masks, and other personal protective equipment (PPE)
- Work in a deep mine
- Lack of acclimatization
- Dehydration
- Age
- A previous heat-related illness. Heart or lung disease, high blood pressure, overweight, thyroid disease. Some medications including over-the-counter drugs can make a person more vulnerable to heat stress. Seek medical advice. Also refer to www.aafp.org/afp/2005/0601/p2133.html for information.

Signs and Symptoms of Heat Exhaustion (most serious; top to bottom)

- Loss of Consciousness
- Seizures
- Hot and dry skin
- Confusion or delirium
- Headache
- Nausea
- Dizziness
- Weakness
- Irritability
- Thirst
- Heavy sweating
- Muscle cramps and pain
- Cluster of red pimples or small blisters that may appear on the skin of the neck, upper chest, under the breasts, in the groin, and in the elbow creases

Preventing Heat Stress

- Slow the pace of heavy physical labor or reschedule it for a cooler time (i.e., night, early a.m.)
- Take frequent work breaks
- Provide shade
- Provide appropriate PPE and encourage light clothing that covers the skin
- Discourage beverages with high caffeine, these promote urination and water loss
- Provide chilled potable water
- Discourage heavy meals before working in heat
- Shield hot equipment or work away from it
- Use air conditioning (for example; environmental cabs)
- Provide training in recognizing risk factors and the signs and symptoms of heat stress

What to do if signs and symptoms are present.

Take the miner to a cool (shaded) environment to rest (sit or lie down). If the person is alert, give them water to drink, in small portions. Severe heat stress can lead to a heat stroke – which is a life-threatening emergency. If the person is unconscious or nearly so, having seizures, has hot and dry skin, and/or is delirious, call 911 and get medical attention immediately. Note: an incident of this type would be immediately reportable to MSHA, Call 1-800-746-1553. See <http://www.msha.gov/codeaphone/ReportableInjury.asp>